

Ukraine set to act on high suicide burden

D L Nordstrom

Injury Prevention 2007;13:224–226. doi: 10.1136/ip.2007.015768

Having survived multiple catastrophes in the 20th century, newly independent Ukraine now has some of the highest injury death rates in Europe. The nation's most common type of injury death is suicide, and its rate is one of Europe's and the world's highest. Alcohol abuse occurs in 20% of men, and major depression in 20% of women. Suicide is the leading cause of death in the Ukrainian Army, which has begun to recognize and address the problem. Mental health is one of three current priorities of the Ukrainian Ministry of Public Health. The government is developing a mental health policy and plan, with potential for prevention of suicide. A national university in the capital has created a graduate school of public health to build human capacity to prevent and control disease and injury.

"The burden of disease due to injuries has elicited virtually no public health response in the countries of central and eastern Europe, even though injuries have long been a much greater problem in the east of Europe than in the west," according to specialists at the London School of Hygiene and Tropical Medicine.¹ A recent Fulbright Scholar Award allowed me to make some observations in one country of eastern Europe.

A former republic of the Union of Soviet Socialist Republics (USSR), Ukraine is important because it is the second largest nation in Europe and is a borderland between Europe and Russia.² As a newly independent state in 1991, Ukraine's perception of the injury problem and its approach to injury control may be instructive for other nations that are also in transition from communism.

Several fields critical to disease surveillance and control—epidemiology, medical statistics, and public health—were neglected in the Soviet Union.³ As recently as 1988, only eight libraries in the USSR had two leading western journals of epidemiology.⁴ In Moscow, national statistical organizations compiled reports with basic tabulations of vital statistics, but they often lacked a public health perspective and the analytic capacity to go beyond routine analyses. Countries of the former Soviet Union also inherited practices such as the designation of some health data as state secrets and the concealment of deaths from certain causes, such as suicide and homicide⁵ and accidents.⁶

INJURY BURDEN

Injury and poisoning is the third highest ranking cause of death, after cardiovascular disease and cancer, in Ukraine, which has 47 million people.⁷ For each manner of injury and poisoning, age-standardized death rates in Ukraine are among the highest of the 52 states in the European Region of



Figure 1 "Alcohol"—a Soviet health education poster.

the World Health Organization (WHO). During the past two decades, the country's mortality from injury and poisoning in women has plateaued at 50 deaths per 100 000, and in men it has climbed from 150 to 250 deaths per 100 000.

The most common manner of injury death in Ukraine is suicide, and the nation's rate is one of Europe's and the world's highest. The annual suicide rate in Ukraine has risen steadily since 1988.⁸ Hanging is the most popular mechanism, used in about 70% of self-inflicted deaths,⁹ followed in frequency by laceration of arm veins and then by jumping from high elevations.¹⁰

Ukraine's suicide rates are highest in persons aged 35–49, which are some of life's most economically productive years.¹⁰ The Ukrainian risk of suicide is six times higher in men than women—four times the comparable world ratio of 1.5.¹¹ In men, the annual risk of suicide is 45 per 100 000 population.¹² This risk is nearly double the risk of motor vehicle injury death—25 per 100 000 Ukrainian men—and nine times larger than the risk of HIV/AIDS death—5 per 100 000.

RISK FACTORS

Suicide risk factors include: psychiatric factors such as depression and alcohol or other drug abuse; family history of suicide; tragic life events; psychological factors such as interpersonal conflict; and social and

Correspondence to:
D L Nordstrom, Department
of Radiology, University of
Wisconsin School of
Medicine and Public Health,
600 Highland Av, E1/330,
Madison, WI 53792, USA;
Dnordstrom@UWHealth.
org

Accepted 23 May 2007

environmental factors such as economic hardship.¹³ Alcohol abuse, tragic life events, and economic hardship have characterized Ukrainian society for a long time. This should not be surprising given Ukraine's 20th century history of two world wars with foreign occupation, mass famine and starvation, and the worst nuclear power plant explosion in history.¹⁴ Nearly one third of the population currently lives in absolute poverty—that is, on less than US \$2.15 per person per day.⁷ In a survey of a representative sample of the national adult population aged 18 years and over, one third of the men and one half of the women rated their health status as bad or rather bad.¹⁵

The relation between alcohol consumption and suicide or attempted suicide is well established among heavier drinkers. The risk of suicidal behavior in this group increases with psychiatric comorbidity.¹³ During the USSR's anti-alcohol campaign from 1985 to 1988, both consumption of alcohol and mortality declined sharply. After that campaign ended and the Soviet Union collapsed, "...a lot of penniless people were wandering the streets, people who had been well-educated, respectable citizens but who had lost their jobs and taken to drink when they could find no place for themselves in the new reality".¹⁶

Among the first 14 countries from four continents to complete a recent WHO-coordinated national mental health survey,¹⁷ Ukraine has the highest rates of alcohol abuse (20%) among men and major depression (20%) among women.¹⁸ In comparison with Germany, for example, rates of alcohol and drug disorders are six times higher in Ukraine, and rates of mood disorders are two and a half times higher.¹⁷ Moreover, of the Ukrainian survey respondents with a serious mental disorder, 80% received no treatment in the 12 months before the interview. Of the respondents with major depression who admitted to suicidal thoughts, 75% had never talked to a professional.¹⁸

Within Ukraine, the eastern region is the most negatively affected. The country's suicide rates are higher in eastern provinces than in other provinces.⁹ Living in the eastern region of Ukraine is a significant risk factor across mental disorders.¹⁸ And pro-communists, who disproportionately live in eastern Ukraine, rank their health worse than anti-communists.¹⁹

INJURY CONTROL

McKee *et al*¹ state five prerequisites for effective health policies: visibility, capacity, ownership, intersectoral action, and effective government. This is fine in theory but currently Ukraine is struggling just to build a nation.² This is occurring in a society whose citizens have complex and contradictory understandings both of what health is and of responsibility for health.²⁰ Opinions in the post-Soviet age differ about the appropriate role of the state in influencing health behavior and status. The level of trust between citizen and state is highly strained.¹⁴ Many in Ukraine today express doubt about the prospects for passage of effective public health legislation and implementation of existing laws.

Nevertheless, some examples of public health achievements in contemporary Ukraine can be found. Current policies and practices, although data are fragmentary, include free distribution of clean needles to drug users to limit spread of HIV infection, ban on alcohol in workplaces, ban on alcohol in blood of motor vehicle drivers, minimum age of 18 to buy cigarettes, underground walkways for pedestrians, ratification of the international treaty for tobacco control, and extensive mass transit system to reduce air pollution and motor vehicle traffic.

Ideally, reduction of injury death rates in the former Soviet Union will require sound epidemiologic studies of traumatic injuries, better safety laws and enforcement, a program to reduce alcohol use, and improved emergency care and transportation.²¹ It is unknown whether these steps will be taken. The priorities of the Ukrainian Ministry of Public Health's current 2-year work plan with WHO are HIV/AIDS, tuberculosis, and mental health. Ukraine plans to develop a

mental health policy and plan,²² which is a sign of potential for action on suicide. Among concerns that may be addressed are the nationwide lack of psychologists and social workers and the limited mental health training of primary healthcare staff.

One government body in Ukraine that has begun to recognize and address the problem of suicide is the Ukrainian Army, in which suicide is annually the first or second leading cause of death.⁸ After determining that medical staff, psychologists, educational officers, and unit commanders correctly answered only 50% of questions concerning suicidal behavior, the Odesa-based, non-governmental organization Human Ecological Health held suicide prevention training seminars for these groups. The army's suicide rate dropped to half its pre-training level—to 16 deaths per 100 000 from 32 deaths per 100 000.

On the basis of an extensive search and synthesis of the literature, experts from 15 countries found two ways to prevent suicide: education of physicians in depression recognition and treatment and restricting access to lethal means.²³ The sources of evidence were published from 1966 to 2005 and included systematic reviews and meta-analyses (n = 10), randomized controlled trials (n = 18), cohort studies (n = 24), and ecological or population-based studies (n = 41). According to the experts, other methods including public education, screening programs, and media education need more evidence of efficacy.

A separate evidence search on suicide prevention identified 10 systematic reviews, including more than 110 unique studies, which met the inclusion criteria.²⁴ Only three of the ten reviews were considered to be of good methodological quality, and no single intervention appeared to be effective in reducing the suicide rate.

After the USSR disappeared, new graduate schools of public health sprang up in many areas in and adjacent to the former Soviet Union. One of these is located at Ukraine's National University of Kyiv Mohyla Academy, which enrolled its first public health students in 2004. This Master's degree program is preparing young people, both health professionals and others, for roles in moving the country forward after decades of underdevelopment. With one of the world's highest suicide rates and the presence of all the known risk factors for suicide, Ukraine has a great opportunity to demonstrate progress in reduction of its suicide rate—perhaps even reaching the goal of a 20% reduction in the number of these and other injury deaths that has been proposed for the world.²⁵

Injury prevention and control occur not in the abstract but in specific contexts. By participating in international organizations and activities, Ukrainian leaders and institutions have shown their desire to modernize their nation. This process will occur slowly as many obstacles are faced and overcome. Although injury, including suicide, is not yet recognized as the leading problem that it is as shown by mortality data, it seems that it eventually will be. For now it is enough to hope that the current attention to mental health will lower the risk of suicide.

Funding: This work was carried out under a 2006–2007 US State Department Fulbright Scholar Award in Kyiv, Ukraine.

Competing interests: None.

REFERENCES

- 1 McKee M, Zwi A, Koupilova I, *et al*. Health policy-making in central and eastern Europe: lessons from the inaction on injuries? *Health Policy Plan* 2000;**15**:263–9.
- 2 Wilson A. *The Ukrainians: unexpected nation*, 2nd edn. New Haven: Yale Nota Bene, 2002.
- 3 Vlassov V. Is there epidemiology in Russia? *J Epidemiol Community Health* 2000;**54**:740–4.
- 4 Rahu M. Cancer epidemiology in the former Soviet Union. *Epidemiology* 1992;**3**:465–70.
- 5 Chenet L, Telishevska M. Epidemiology, medical demography and data quality issues in the former Soviet Union. *J Epidemiol Community Health* 2000;**54**:722–3.
- 6 Deacon B. Medical care and health under state socialism. *Int J Health Serv* 1984;**14**:453–80.
- 7 WHO Regional Office for Europe. Highlights on health in Ukraine 2005. Copenhagen: World Health Organization, 2006.

- 8 **Rozanov VA**, Mokhovikov AN, Stiliha R. Successful model of suicide prevention in the Ukraine military environment. *Crisis: The Journal of Crisis Intervention and Suicide Prevention* 2002;**23**:171–7.
- 9 **Kondrichin SV**, Lester D. Suicide in the Ukraine. *Crisis: The Journal of Crisis Intervention and Suicide Prevention* 2002;**23**:32–3.
- 10 **Kryzhanovskaya L**, Pilyagina G. Suicidal behavior in the Ukraine, 1988–1998. *Crisis: The Journal of Crisis Intervention and Suicide Prevention* 1999;**2**:184–90.
- 11 **Reza A**, Mercy JA, Krug E. Epidemiology of violent deaths in the world. *Inj Prev* 2001;**7**:104–11.
- 12 **WHO**. European database of mortality indicators for 67 causes of death, January 2007. <http://data.euro.who.int/hfamdb/> (accessed 11 Jun 2007).
- 13 **WHO Regional Office for Europe**. Mental health: facing the challenges, building solutions. Report from the WHO European Ministerial Conference. Copenhagen: World Health Organization, 2005.
- 14 **Petryna A**. Life exposed: biological citizens after Chernobyl. Princeton: Princeton University Press, 2002.
- 15 **Cockerham WC**, Hinote BP, Abbott P, et al. Health lifestyles in Ukraine. *Soz Pravitivmed* 2005;**50**:264–71.
- 16 **Politkovskaya A**. *Putin's Russia*. London: Harvill Press, 2004.
- 17 **WHO World Mental Health Survey Consortium**. Prevalence, severity, and unmet need for treatment of mental disorders in the World Health Organization World Mental Health Surveys. *JAMA* 2004;**291**:2581–90.
- 18 **Bromet EJ**, Gluzman SF, Paniotto VI, et al. Epidemiology of psychiatric and alcohol disorders in Ukraine: Findings from the Ukraine world mental health survey. *Soc Psychiatry Psychiatr Epidemiol* 2005;**40**:681–90.
- 19 **Cockerham WC**, Hinote BP, Cockerham GB, et al. Health lifestyles and political ideology in Belarus, Russia, and Ukraine. *Soc Sci Med* 2006;**62**:1799–809.
- 20 **Abbott PA**, Turmov S, Wallace C. Health world views of post-soviet citizens. *Soc Sci Med* 2006;**62**:228–38.
- 21 **Tulchinsky TH**, Varavikova EA. Addressing the epidemiologic transition in the former Soviet Union: strategies for health system and public health reform in Russia. *Am J Public Health* 1996;**86**:313–20.
- 22 **WHO Country Office in Ukraine and Ukraine Ministry of Health**. WHO-AIMS report on mental health system in Ukraine: a report of the assessment of the mental health system in Ukraine using the World Health Organization—Assessment Instrument for Mental Health Systems (WHO-AIMS). Kiev: World Health Organization, 2006.
- 23 **Mann JJ**, Apter A, Bertolote J, et al. Suicide prevention strategies: a systematic review. *JAMA* 2005;**294**:2064–74.
- 24 **Guo B**, Harstall C. For which strategies of suicide prevention is there evidence of effectiveness? Copenhagen: World Health Organization, 2004, <http://www.euro.who.int/Document/E83583.pdf> (accessed 11 Jun 2007).
- 25 **Rivara FP**, Mock C. The 1,000,000 lives campaign. *Inj Prev* 2005;**11**:321–3.

BMJ Clinical Evidence—Call for contributors

BMJ Clinical Evidence is a continuously updated evidence-based journal available worldwide on the internet which publishes commissioned systematic reviews. *BMJ Clinical Evidence* needs to recruit new contributors. Contributors are healthcare professionals or epidemiologists with experience in evidence-based medicine, with the ability to write in a concise and structured way and relevant clinical expertise.

Areas for which we are currently seeking contributors:

- Secondary prevention of ischaemic cardiac events
- Acute myocardial infarction
- MRSA (treatment)
- Bacterial conjunctivitis

However, we are always looking for contributors, so do not let this list discourage you.

Being a contributor involves:

- Selecting from a validated, screened search (performed by in-house Information Specialists) valid studies for inclusion.
- Documenting your decisions about which studies to include on an inclusion and exclusion form, which we will publish.
- Writing the text to a highly structured template (about 1500–3000 words), using evidence from the final studies chosen, within 8–10 weeks of receiving the literature search.
- Working with *BMJ Clinical Evidence* editors to ensure that the final text meets quality and style standards.
- Updating the text every 12 months using any new, sound evidence that becomes available. The *BMJ Clinical Evidence* in-house team will conduct the searches for contributors; your task is to filter out high quality studies and incorporate them into the existing text.
- To expand the review to include a new question about once every 12 months.

In return, contributors will see their work published in a highly-rewarded peer-reviewed international medical journal. They also receive a small honorarium for their efforts.

If you would like to become a contributor for *BMJ Clinical Evidence* or require more information about what this involves please send your contact details and a copy of your CV, clearly stating the clinical area you are interested in, to CECommissioning@bmjgroup.com.

Call for peer reviewers

BMJ Clinical Evidence also needs to recruit new peer reviewers specifically with an interest in the clinical areas stated above, and also others related to general practice. Peer reviewers are healthcare professionals or epidemiologists with experience in evidence-based medicine. As a peer reviewer you would be asked for your views on the clinical relevance, validity and accessibility of specific reviews within the journal, and their usefulness to the intended audience (international generalists and healthcare professionals, possibly with limited statistical knowledge). Reviews are usually 1500–3000 words in length and we would ask you to review between 2–5 systematic reviews per year. The peer review process takes place throughout the year, and our turnaround time for each review is 10–14 days. In return peer reviewers receive free access to *BMJ Clinical Evidence* for 3 months for each review.

If you are interested in becoming a peer reviewer for *BMJ Clinical Evidence*, please complete the peer review questionnaire at www.clinicalevidence.com/ceweb/contribute/peerreviewer.jsp